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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,555	10/22/2001	Bruno Langlois	RN97075D1	4508

7590

12/02/2003

RHODIA INC.  
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CRANBURY, NJ 08512

EXAMINER

KHARE, DEVESH

ART UNIT	PAPER NUMBER
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1623

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/082,555

Applicant(s)

LANGLOIS, BRUNO

Examiner

Devesh Khare

Art Unit

1623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 22-36 and 38-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 22-36 and 38-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

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Applicant's Amendment and remarks filed on 08/06/03 are acknowledged.

Claims 22-24 and 33 have been amended. Claim 37 has been cancelled. New claims 38-41 have been added. The amended application and new abstract have been accepted. The rejection of claim 24 under 35 U.S.C. 112, second paragraph, has been overcome through applicants' amendment to the claims.

Claims 22-36 and 38-41 are currently pending in this application.

**35 U.S.C. 112, second paragraph rejection**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

*The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.*

Newly added claims 25, 32 and 41 are rejected under the second paragraph of 35 U.S.C. 112, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(A) In claims 25 and 32, the term "derivatives" is a relative term, which renders the claim indefinite. In the absence of the specific derivatizations to the compound claimed core or distinct language to describe the structural modifications or the chemical names of derivatized compounds, the identity of said derivatives would be difficult to describe and the metes and bounds of said derivatives applicants regard as the invention cannot be sufficiently determined because they have not been particularly pointed out or distinctly articulated in the claims.

(B) Claim 41 fails to further limit invention of claim 40. The intended use of the process for stabilizing the rheological properties of a fluid of claim 40 is not further limited.

**35 U.S.C. 103(a) rejection**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

Claims 22 -36 and 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al. (EP 0765939) in view of Patton (GB 1,080,248) of record.

The claims 22-36 and 38-41 are directed to a process for oil extraction comprising the step of using, at a temperature between 100 and 140<sup>0</sup> C, a guar free drilling fluid comprising a xanthan gum having a percentage of acetyl groups in the range 0 to 3%, said xanthan gum in the form of a polypentamer, at least one compound which increases the ionic strength of the fluid, and at least one fluid loss control agent. Additional claim limitations include the addition of a thinner or dispersing agent (claim 31), a weighting compound (claim 34), at least one mineral colloid (claim 35), and water (claim 36).

In claims 38-41, applicants claim a process for controlling fluid loss in a guar free drilling fluid and oil extraction comprising the step of using, at a temperature between 100 and 140<sup>0</sup> C, a guar free drilling fluid comprising a xanthan gum having a percentage of acetyl groups in the range 0 to 3%, said xanthan gum in the form of a polypentamer, at least

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one compound which increases the ionic strength of the fluid, and at least one fluid loss control agent.

Claim 38 and 39 are drawn to a process for controlling fluid loss in a guar free drilling fluid.

Claim 40 and 41 are drawn to a process for stabilizing the rheological properties of a fluid used in oil production.

Doherty et al. (Doherty) teach a solution of non-acetylated xanthan, 1000 ppm of xanthan in 50,000 ppm NaCl brine (see p 10, example 7). The non-acetylated xanthan is disclosed as a viscofying agent for aqueous solutions, particularly for use in oil recovery. Doherty disclose that the rheological property of deacetylated xanthan, that is, being a better viscosifier than native xanthan (see p 4, lines 13-17 and 31-34). The drilling fluid according to the instant invention may be used at a temperature of up to 140<sup>0</sup> C, however, Doherty teach in the examples that the xanthan gum solution viscosities were measured over the temperature range of 25<sup>0</sup> to about 80<sup>0</sup> C which does not indicate that 80<sup>0</sup> is the maximum temperature that the composition can withstand. While the Doherty teach a non-acetylated xanthan gum solution comprising, in addition to water, the xanthan gum and a NaCl brine, Doherty differ from applicant's process for oil extraction in that Doherty do not suggest the use of a fluid loss control agent in the process. Doherty does not teach the use of other additives recited in dependent claims. However, Doherty does suggest the use of additives typically used in solutions with utility in the field of enhanced oil recovery. Use of a known member of a class of

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materials in a process is not patentable if other members of the class were known to be useful for that purpose, even though results are better than expected.

Patton et al. disclose the use of carbohydrates produced by the genus *Xanthomonas*, xanthan gum, in drilling fluids in the process for drilling of oil wells. The precipitation step involved in the preparation of these carbohydrates that leads to deacetylation (p 2, lines 95-100). Patton et al. disclose the use of additives : weighting compounds such as barium sulfate ; mineral colloids such as bentonite ; and fluid loss control agents such as carboxymethylcellulose (p 3, lines 89-128). It is noted that Patton et al. does not provide specific disclosures regarding the use of a xanthan gum having a percentage of acetyl groups in the range 0 to 3% and said xanthan gum in the form of a polypentamer.

Therefore, one of ordinary skill in the art would have found the applicants claimed process for oil extraction comprising the step of using, at a temperature between 100 and 140<sup>0</sup> C, a guar free drilling fluid comprising a xanthan gum having a percentage of acetyl groups in the range 0 to 3%, to have been obvious at the time the invention was made having the above cited references before him, since Doherty et al. teach the use of non-acetylated xanthan as a viscosifying agent for aqueous solutions, particularly for use in oil recovery and Patton et al., teach the use of use additives in drilling fluids: weighting compounds such as barium sulfate ; mineral colloids such as bentonite ; and fluid loss control agents such as carboxymethylcellulose, one skilled in the art would have a reasonable expectation for success in combining both references to accomplish

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a process for oil extraction comprising the step of using, at a temperature between 100 and 140<sup>0</sup> C, a guar free drilling fluid comprising a xanthan gum, at least one compound which increases the ionic strength of the fluid, and at least one fluid loss control agent.

The motivation for doing so is provided by Doherty et al., which suggests the use of xanthan gum in petroleum drilling fluids (see p2, lines 11-12).

### **Rejection Maintained**

Rejection of claims 22-36 under 35 U.S.C. 103(a) is maintained for the reasons of record.

New claims 38-41 are also rejected under 35 U.S.C. 103(a) as being unpatentable over Doherty et al. (EP 0765939) in view of Patton (GB 1,080,248), as already applied to claims 22-36.

In claims 38-41, applicants claim a process for controlling fluid loss in a guar free drilling fluid and oil extraction comprising the step of using, at a temperature between 100 and 140<sup>0</sup> C, a guar free drilling fluid comprising a xanthan gum having a percentage of acetyl groups in the range 0 to 3%, said xanthan gum in the form of a polypentamer, at least one compound which increases the ionic strength of the fluid, and at least one fluid loss control agent. Claims 38-41 are obvious within the prior art already set forth in the rejections of claims 22-36.

### **Response to Arguments**

Applicant's arguments filed on 08/06/03 traversing the rejection of claims 22-36 under 35 U.S.C 103(a) have been fully considered but they are not persuasive.

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Applicants argue that "Patton does not teach the particular xanthan gums" and "Doherty is mute on fluid loss control properties and fluid loss agents". It is noted that Patton et al. disclose the use of fluid loss control agents such as carboxymethylcellulose (p 3, lines 89-128) in combination with the carbohydrates produced by the genus *Xanthomonas*, xanthan gum (page 2, col. 1, lines 2-35), in drilling fluids in the process for drilling of oil wells. Doherty discloses the non-acetylated xanthan as a viscofying agent for aqueous solutions, particularly for use in oil recovery (p 4, lines 13-17 and 31-34) because the non-acetylated xanthan polysaccharide will have improved rheological and viscosifying properties (page 4, lines 22-24). The drilling fluid according to the instant invention may be used at a temperature of up to 140<sup>0</sup> C, however, Doherty teaches in the example 6 that the xanthan gums are effective viscosifiers even at high temperature such as 75<sup>0</sup>-100<sup>0</sup> C (see page 10, lines 13-15). The skilled artisan in this field would be quite capable of manipulating a process for oil extraction comprising the step of using, at a temperature between 100 and 140<sup>0</sup> C, a guar free drilling fluid comprising a xanthan gum having a percentage of acetyl groups in the range 0 to 3%, at least one compound which increases the ionic strength of the fluid, and at least one fluid loss control agent.

**2. THIS ACTION IS MADE FINAL.** Final (necessitated by amendment due to new rejection (actually same rejection) over newly added claims). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not



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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

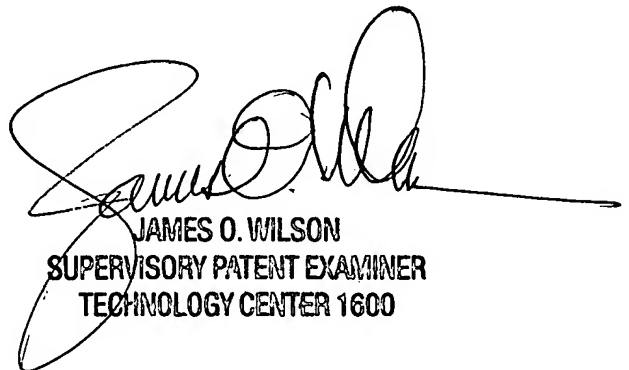
Examiner should be directed to Devesh Khare whose telephone number is (703)605-

1199. The examiner can normally be reached on Monday to Friday from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson, Supervisory Patent Examiner, Art Unit 1623 can be reached at 703-308-4624. The official fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-4556 or 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Devesh Khare, Ph.D.,JD(3Y).  
Art Unit 1623  
November 28,2003



JAMES O. WILSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600